

REMARKS

Claims 3-16 and 18-33 are pending. Claims 25 and 27-31 stand withdrawn from consideration as drawn to a non-elected invention. Claims 3-16, 18-26, 32 and 33 stand rejected.

Claims 26 and 32 are amended. Support for the amendments can be found, *inter alia*, in paragraph [0062] of the Specification.¹ No new matter is introduced.

Applicant has reviewed the Office action, including the Examiner's remarks and the references cited therein. Applicant submits that the following remarks are fully responsive to the Office action, and that all pending claims are patentable over the cited references.

Rejection Under 35 U.S.C. § 112

The Examiner rejects claim 32 under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the invention.

Specifically, the Examiner indicates that “[c]laim 32 appears to contradict itself by reciting an electrode ‘interposed in a fixed position between the inner surface and the tubular outer surface,’ then later reciting that the electrode ‘generally defines an electrode surface that is raised above the outer surface of the catheter.’” Office action at 2.

Applicant has amended claim 32 to clarify that “the exposed portion of the at least one braided electrode generally defines an electrode surface that is raised above the outer surface of the catheter shaft.” That is, “[d]epending on the thickness of the braided electrode strands 74 and the thickness of the outer surface 80, the outer surface of the braided electrode may be slightly raised” Specification, ¶ [0062]. Applicant submits that the clarifying amendment overcomes the § 112 rejection.

¹ Paragraph references are to the application as published. United States patent application publication no. 2004/0143256 (Jul. 22, 2004).

Rejections Under 35 U.S.C. § 102

Claims 3-13, 15, 16, 18, 26, and 33

The Examiner rejects claims 3-13, 15, 16, 18, 26 and 33 under 35 U.S.C. § 102 as anticipated by United States patent no. 5,643,197 (“Brucker”). To be anticipatory, a single prior art reference must explicitly or inherently teach each and every element of the claimed invention. MPEP § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)). Applicant respectfully submits that Brucker fails to meet this standard.

As amended, claim 26 recites that “the fixed braided electrode means extends around less than about 180 degrees of a circumference of the catheter shaft means.” This facilitates placement of the ablation catheter “such that the entirety of the electrode is placed in complete or partial circumferential contact with the wall of the target vein.” Specification, ¶ [0059].

Brucker, on the other hand, teaches a braided electrode that covers “an entire circumference” of the ablation catheter. Brucker, 8:15-16. Thus, Brucker teaches an electrode that extends around *more than* about 180 degrees of a circumference of the catheter shaft, and accordingly does not anticipate claim 26.

Claim 33 recites “at least one braided electrode *interposed* in a fixed position *between* the inner surface and the outer tubular surface.” Claim 33 (emphasis added). That is, in some embodiments of the invention, “[t]he braided electrode . . . is sandwiched between the inner and outer surfaces.” Specification, ¶ [0061]. Even where a portion of the outer surface is removed to define a braid window, “a portion of the braided electrode remains sandwiched between the inner 78 and outer 80 surface to secure the electrode in place.” *Id.*, ¶ [0062].

Brucker, on the other hand, teaches a braided electrode that extends around the outer circumference of the ablation catheter. Brucker, 8:15-16, Figs. 15 and 16. That is, Brucker’s electrode is on the outer surface of the catheter. Brucker does not appear to teach that any portion of the electrode is sandwiched (“interposed”) between the inner and outer surfaces of Brucker’s catheter. Accordingly, Brucker does not anticipate

claim 33. Claims 3-13, 15, 16, and 18 depend from claim 33 and are not anticipated by Brucker for at least the same reasons that claim 33 is not anticipated by Brucker.

For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3-13, 15, 16, 18, 26, and 33 over Brucker.

Claims 3-16, 18, 26 and 33

The Examiner rejects claims 3-16, 18, 26 and 33 under 35 U.S.C. § 102 as being anticipated by United States patent no. 6,837,886 (“Collins”). Applicant respectfully disagrees.

Claim 26 recites an ablation catheter that includes “a *fixed* braided electrode means[,]” while claim 33 recites an ablation catheter that includes “at least one braided electrode interposed in a *fixed* position” Claims 26, 33 (emphasis added). In other words, in some embodiments of the invention, the braided electrode does not move relative to the ablation catheter.

Collins teaches “a braided conductive member 28 anchored at respective ends 30 and 32 to the first sheath 24 and the second sheath 26, respectively.” Collins, 5:1-3. Collins’s braided conductive member 28, however, is not fixed. Rather, “distal advancement of the second sheath 26 over inner member 22 causes the braided conductive member to 28 to *expand radially to assume various diameters and/or a conical shape.*” *Id.*, 5:6-9; see also Figs. 2-5. That is, Collins teaches that braided conductive member 28 moves relative to the catheter. It follows that Collins does not anticipate claims 26 and 33. Claims 3-16 and 18 depend from claim 33 and are not anticipated by Collins for at least this same reason.

For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3-16, 18, 26, and 33 in view of Collins.

Rejections Under 35 U.S.C. § 103

Claims 3-13, 15, 16, 18, 26, 32, and 33

The Examiner rejects claims 3-13, 15, 16, 18, 26, 32, and 33 under 35 U.S.C. § 103 as obvious over United States patent no. 6,078,830 (“Levin”) in view of Brucker. Applicant respectfully disagrees.

Though the prior art references need not teach or suggest each and every limitation of a claim for that claim to be obvious, Applicant contends that the differences between the rejected claims and the references cited are sufficiently great so as to render the claimed invention non-obvious to one of ordinary skill in the art at the time the invention was made. MPEP § 2141 (“[T]he focus when making a determination of obviousness should be on what a person of ordinary skill in the pertinent art would have known at the time of the invention, and *on what such a person would have reasonably expected to have been able to do in view of that knowledge.*”) (emphasis added). In particular, as discussed in further detail below, Applicant respectfully submits that one of ordinary skill in the art would not have learned the claimed invention from the asserted references.

The shortcomings of Brucker with respect to claim 26 are discussed at length above. Levin does not cure these shortcomings. Indeed, Levin similarly teaches electrodes that extend around the entire circumference of the catheter shaft. Levin, Fig. 2. Applicant respectfully submits that claim 26 is therefore substantially different from, and accordingly non-obvious over, Levin and Brucker, whether considered alone or in combination.

Claims 32 and 33 each recite that “the outer tubular surface defin[es] at least one braided electrode aperture such that a portion of the braided electrode is exposed[.]” The term “aperture” means “[a]n opening, as a hole, gap, or slit[.]” Webster’s II New College Dictionary 52 (2001). By way of further explanation, in some embodiments of the invention, “[t]he outer surface 80 of the shaft 52 is partially removed to define a braid window 82 Alternatively, the outer surface may be fabricated to define an elongate rectangular aperture or braid window” Specification, ¶ [0062].

Neither Levin nor Brucker defines an aperture (e.g., an opening). As discussed above, the electrode in Brucker is placed about the outer surface of the catheter shaft, leaving the outer surface continuous beneath the electrode. Likewise, Levin teaches that wall section 26 is formed by molding. Levin, 7:35-10:44. Applicant submits that Levin's molding process results in a wall section 26 having a continuous outer surface that lacks openings. In other words, neither Brucker nor Levin teaches or suggests an "outer tubular surface defining at least one . . . aperture" through which "a portion of the braided electrode is exposed" as recited in claims 32 and 33. Applicant therefore respectfully submits that claims 32 and 33 are substantially different from, and therefore non-obvious over, Levin and Brucker, whether considered alone or in combination. Claims 3-13, 15, 16, and 18 depend from claim 33 and are non-obvious for at least the same reasons that claim 33 is non-obvious.

For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3-13, 15, 16, 18, 26, 32, and 33 over Levin and Brucker.

Claim 14

The Examiner rejects claim 14 under 35 U.S.C. § 103 as obvious over Levin in view of Brucker and Collins. Applicant respectfully disagrees.

Claim 14 depends from claim 33. Applicant has discussed at length above several substantial differences between claim 33 and the cited references. Applicant reiterates here that Collins teaches away from the claimed invention insofar as Collins teaches an electrode that moves relative to the ablation catheter rather than the "fixed position" recited in claim 33. As another example, neither Levin nor Brucker teaches or suggests an "outer tubular surface defining at least one . . . aperture" through which "a portion of the braided electrode is exposed" as recited in claim 33. Applicant accordingly respectfully submits that one of ordinary skill in the art would not have learned the claimed invention, including, *inter alia*, "at least one braided electrode interposed in a *fixed position*" that is "exposed" through "at least one braided electrode *aperture*" from the asserted references without the improper application of hindsight in

view of the present invention. Therefore, claim 14 is substantially different from, and non-obvious over, the combination of Levin, Brucker, and Collins. The rejection of claim 14 should be reconsidered and withdrawn.

Claims 19-23

The Examiner rejects claims 19-23 under 35 U.S.C. § 103 as obvious over Levin and Brucker in view of United States patent no. 6,120,500 (“Bednarek”). Applicant respectfully disagrees.

Claims 19-23 depend from claim 33. The shortcomings of Levin and Brucker with respect to claim 33 are discussed at length above and are not cured by the addition of Bednarek. Indeed, the Examiner makes no assertion that Bednarek teaches the claimed “aperture,” relying on Bednarek only for its teaching of a control wire. Office action at 6-7. It follows that claims 19-23 are substantially different from, and therefore non-obvious over, the combination of Levin, Brucker, and Bednarek. Applicant accordingly respectfully requests reconsideration and withdrawal of the rejection of claims 19-23 under 35 U.S.C. § 103.

The Examiner also rejects claims 19-23 under 35 U.S.C. § 103 as obvious over Brucker or Collins in view of Bednarek. Applicant respectfully disagrees.

Applicant has already addressed the shortcomings of the combination of Levin, Brucker, and Bednarek with respect to claims 19-23. Removing Levin and substituting Collins for Brucker does not address these shortcomings. Indeed, as discussed above, Collins teaches away from the present invention insofar as it teaches a moving electrode rather than the “fixed” relationship recited in claim 33 from which claims 19-23 depend. Applicant therefore submits that claims 19-23 are substantially different from, and therefore non-obvious over, the asserted combination of Brucker or Collins in view of Bednarek. Reconsideration and withdrawal of the rejection of claims 19-23 is respectfully requested.

Claim 24

The Examiner rejects claim 24 under 35 U.S.C. § 103 as obvious over Levin, Brucker, and Bednarek in view of United States patent no. 6,080,151 (“Swartz”). Applicant respectfully disagrees.

Claim 24 depends from claim 23. The shortcomings of Levin, Brucker, and Bednarek with respect to claim 23, discussed at length above, are not cured by the addition of Swartz. Indeed, the Examiner makes no assertion that Swartz teaches the claimed “aperture,” relying on Swartz only for its teaching of “provid[ing] electrode leads through a second lumen to keep the wires separate from the fluid delivery lumen.” Office action at 7. It follows that claim 24 is substantially different from, and therefore non-obvious over, the combination of Levin, Brucker, Bednarek, and Swartz.

The Examiner also rejects claim 24 under 35 U.S.C. § 103 as obvious over Collins or Brucker in view of Bednarek and Swartz. Applicant respectfully disagrees.

Applicant has already addressed the shortcomings of the combination of Levin, Brucker, and Bednarek with respect to claim 23. Removing Levin and substituting Collins for Brucker does not address these shortcomings. Indeed, as discussed above, Collins teaches away from the present invention insofar as it teaches a moving electrode rather than the “fixed” relationship recited in claim 33 from which claim 24 depends. As discussed above, the addition of Swartz also fails to address these shortcomings. Applicant accordingly respectfully submits that claim 24 is substantially different from, and therefore non-obvious over, the asserted combination of Collins or Brucker in view of Bednarek and Swartz.

Applicant accordingly respectfully requests reconsideration and withdrawal of all rejections of claim 24 under 35 U.S.C. § 103.

Claim 32

The Examiner rejects claim 32 under 35 U.S.C. § 103 as obvious over Brucker or Collins in view of Levin. Applicant respectfully disagrees.

Applicant has already addressed the shortcomings of the combination of Brucker and Levin with respect to claim 32. Applicant has also addressed the shortcomings of

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the addition of Collins (e.g., Collins teaches away from claim 32 insofar as Collins teaches a moving electrode rather than the “fixed” relationship recited in claim 32). Thus, Applicant respectfully submits that claim 32 is substantially different from, and therefore non-obvious over, the asserted combination either Brucker or Collins in view of Levin. Reconsideration and withdrawal of the rejection of claim 32 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the application is in condition for allowance, and requests that all rejections be withdrawn, that all pending claims be allowed, and that the application be passed to issue. If, for any reason, the Examiner finds the application to be in other than condition for allowance, the Examiner is invited to contact the undersigned in an effort to resolve any matter still outstanding before issuing another action.

Applicant has provided for a one month extension of time concurrently herewith. Should any further extension of time be deemed necessary for this paper to be considered timely, Applicant hereby petitions therefor under 37 C.F.R. § 1.136.

Authorization is hereby granted to charge any fees due with the filing of this document, including any fees for any further extensions of time deemed necessary, to Deposit Account No. 50-1129 with reference to Attorney Docket No. 0B-044401US/82410-0053.

Respectfully submitted,

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